**IN THE CLAIMS**:

Please amend the claims, as follows:

Claim 1 (currently amended): A moisture sensing apparatus, comprising:

an oscillator having an output for supplying an AC signal;

a sensor having a sensor pad, a driven ring around the pad and connected to the oscillator output, and a ground plate around the ring; and

a precision rectifier connected to the sensor for rectifying a signal from the sensor to form a DC signal that is proportional to the moisture content, the precision rectifier comprising:

an operational amplifier having one input connected to the pad, another input, and an output, the operational amplifier being operative to obtain a difference between input signals;

a first diode connected to the output of the operational amplifier and in a feedback loop between the operational amplifier output and the other input of the operational amplifier to nullify variations in the rectified signal that are due to temperature induced variations of diode parameters, the first diode having an output for supplying a rectified signal that is a monotonic function of moisture content of material that is in contact with the sensor; and

a second diode connected between the output and the other input of the operational amplifier for reducing output errors.

Claim 2 (original): The moisture sensing apparatus of claim 1, including a reactive impedance connected across the pad and ring of the sensor for providing a baseline signal for the rectified signal.

Claim 3 (original): The moisture sensing apparatus of claim 2, wherein the reactive impedance comprises parallel connected, resistance and capacitance members.

Claim 4 (original): The moisture sensing apparatus of claim 1, including a differential amplified circuit connected between the operational amplifier and the sensor for cancelling part of a signal from the pad of the sensor, using a sample of AC signal from the oscillator.

Claim 5 (original): The moisture sensing apparatus of claim 1, wherein the sensor comprises means defining an support substrate, the sensor pad being on the support substrate, the driven ring being on the support substrate and extending around the pad and spaced from the pad to define a first closed loop around the pad, and the ground plate being on the support substrate and extending around the ring and defining a second closed loop around the ring, the pad, the ring and the plate all lying in a common contact plane for the sensor, which contact plane is adapted to be in contact with a surface for measuring moisture content at the surface as a function of capacitance across the loops, the pad, the ring, the plate, and the loops having no angular corners so as to avoid electrostatic field fringing effects.

Claim 6 (currently amended): A contact sensor for a moisture sensing apparatus having an oscillator with an output for supplying an AC signal and an operational amplifier with precision rectifier means for supplying a rectified signal that is proportional to a moisture content of material that is in contact with a contact plane of the contact sensor, the contact sensor, comprising:

means defining an support substrate;

a conductive sensor pad on the support substrate;

a conductive driven ring on the support substrate, extending around the pad and spaced from the pad to define a first closed loop around the pad; and

a conductive ground plate on the support substrate, extending around the ring and defining a second closed loop around the ring;

the pad, the ring and the plate all lying in the contact plane for the sensor, which contact plane is adapted to be in contact with a surface for measuring moisture content at the surface, as a function of capacitance across the loops;

the pad, the ring, the plate, and the loops having no angular corners to avoid electrostatic field fringing effects, wherein

the precision rectifier means comprises:

an operational amplifier having one input connected to the pad, another input, and an output;

a first diode connected to the output of the operational amplifier and in a feedback loop between the operational amplifier output and the other input of the operational amplifier to nullify variations in the rectified signal that are due to temperature induced variations of diode parameters, the first diode having an output for supplying a rectified signal that is a monotonic function of moisture content of material that is in contact with the sensor; and

a second diode connected between the output and the other input of the operational amplifier for reducing output errors, and

the operational amplifier being operative to obtain a difference between input signals.

Claim 7 (original): The contact sensor of claim 6, wherein at least one of the loops is oval.

Claim 8 (original): The contact sensor of claim 6, wherein at least one of the loops is rectangular with rounded corners.

Claim 9 (original): The contact sensor of claim 6, wherein at least one of the loops is racetrack shaped.

Claim 10 (original): The contact sensor of claim 6, wherein all corners of the pad, the ring, the plate, and the loops have radii of at least 1/16th inch.

Claim 11 (currently amended): A moisture sensing apparatus comprising:

an oscillator having an output for supplying an AC signal;

a contact sensor connected to the oscillator for changing the AC signal as a function of moisture content at a surface in contact with the contact sensor;

a precision rectifier connected to the sensor for rectifying a signal from the sensor to form a DC signal that is proportional the moisture content; and

a reactive impedance connected across the sensor for providing a baseline signal for DC signal, wherein

the precision rectifier comprises:

an operational amplifier having one input connected to the sensor, another input, and an output;

a first diode connected to the output of the operational amplifier and in a

feedback loop between the operational amplifier output and the other input of the operational amplifier to nullify variations in the rectified signal that are due to temperature induced variations of diode parameters, the first diode having an output for supplying a rectified signal that is a monotonic function of moisture content of material that is in contact with the sensor; and

a second diode connected between the output and the other input of the operational amplifier for reducing output errors, and

the operational amplifier being operative to obtain a difference between input signals.

Claim 12 (original): The moisture sensing apparatus of claim 11, wherein the reactive impedance comprises parallel connected, resistance and capacitance members.

Claim 13 (original): The moisture sensing apparatus of claim 11, wherein the sensor has a cental pad with no angular corners.

Claim 14 (original): The moisture sensing apparatus of claim 11, wherein the precision rectifier comprises an operational amplifier having one input connected to a pad of the sensor, the operational amplifier having another input, and an output, a first diode connected to the output of the operational amplifier and in a feedback loop between the operational amplifier output and the other input of the operational amplifier to nullify variations in the DC signal that arise from temperature induced variations in diode parameters, the first diode having an output for supplying the DC signal, and a second diode connected between the operational amplifier output and the other input of the

operational amplifier.

Claim 15 (original): The moisture sensing apparatus of claim 14, including a differential amplified circuit connected between the operational amplifier and the sensor for cancelling part of a signal from the pad of the sensor, using a sample of AC signal from the oscillator.